

ERGONOMICS RISK ANALYSIS

Employee Information:

 Employee Number: _____ Name: Sean Rasmussen, Miguel Castro Date: 12/18/02

 L-code: _____ Building: 241 Room: 1756 Email: _____

 Division: HCD Group: SAT Job Title: Technicians

 Job Description: SAT Sampling
Evaluator:

 Name: Cheryl Bennett L-Code: 438 Email: bennett13@llnl.gov
Supervisor:

 Name: Bill Shea L-Code: 369 Email: shea1@llnl.gov
Awkward Postures

Neck	<input type="checkbox"/> No Problem Observed <input checked="" type="checkbox"/> Twisted (rotated) <input checked="" type="checkbox"/> Tilted Back <input checked="" type="checkbox"/> Tilted Forward <input checked="" type="checkbox"/> Lateral (bending side to side) <input type="checkbox"/> Other	Specific Job Tasks: Ceiling swipes, Hood Swipes, Floor/Under hood wall	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
Wrist	<input type="checkbox"/> No Problem Observed or Reported <input checked="" type="checkbox"/> Flexion <input checked="" type="checkbox"/> Ulnar Deviation <input checked="" type="checkbox"/> Extension <input checked="" type="checkbox"/> Radial Deviation <input type="checkbox"/> Other	Specific Job Tasks: Holding Meter taking swipes; Using broom type device for swipes	Solutions: See above; Investigate alternative ways of supporting meter
Elbows/Forearm	<input type="checkbox"/> No Problem Observed or Reported <input checked="" type="checkbox"/> Flexed (arm bent up) <input checked="" type="checkbox"/> Extended (arm straight) <input checked="" type="checkbox"/> Winged (away from body) <input checked="" type="checkbox"/> Supination (palm up) <input checked="" type="checkbox"/> Pronation (palm down) <input checked="" type="checkbox"/> Sustained extension/flexion <input type="checkbox"/> Other	Specific Job Tasks: Holding meter in various positions. Very sustained	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber); Investigate alternative ways of supporting meter
Back	<input type="checkbox"/> No Problem Observed or Reported <input type="checkbox"/> Slouched <input type="checkbox"/> Inadequate Lumbar Support <input checked="" type="checkbox"/> Twisted <input checked="" type="checkbox"/> Other – Hyper extending Reaching Ceiling	Specific Job Tasks: Bending over to get into under sinks and P-traps	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
Shoulders	<input type="checkbox"/> No Problem Observed or Reported <input type="checkbox"/> Forward Reach <input type="checkbox"/> Reaching Behind <input type="checkbox"/> Raised/above shoulder height <input type="checkbox"/> Other	Specific Job Tasks: Holding meter to ceiling, walls. Reaching into hood.	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
Legs	<input type="checkbox"/> Insufficient leg clearance <input checked="" type="checkbox"/> Stance <input checked="" type="checkbox"/> Other - Stabalizing on ladder	Specific Job Tasks: Kneeling on floors inside glove boxes Climbing ladders	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)) and ladders with platform to provide more stability

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Other	<input checked="" type="checkbox"/> Work surface height	Specific Job Tasks: Various	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
Repetitive Activities (quantity)		Specific Job Tasks: Taking swipes	Solutions: Consider Pre-work warm-up and periodic stretching program
Static Postures (quantify)	Frequent	Specific Job Tasks: Monitor held just above surface.	Solutions: Consider Pre-work warm-up and periodic stretching program
Contact Stress/Pressure (quantity)	Monitor must be held above surface to avoid contact with trying surface.	Specific Job Tasks: Holding monitor	Solutions: Warm-up/stretching may help; Education to avoid excess tension or squeezing
Work Style/Flow	Data entry (may vary) B222 Routine includes a variety of tasks; meters background print out forms swipes meter. If suiting up after lunch.	Specific Job Tasks:	Solutions: In contaminated areas where suited up- Investigate ways to make it easier to take mini-breaks.
Environment (Organization, access, layout, hazards, lighting, temperature)	Beryllium, unknown hazardous materials, radiation, Asbestos, low light levels	Specific Job Tasks:	Solutions:
Vibration (Quantify)	Jack hammer, Glove boxes	Worst case ladders	Solutions: Need to observe to make recommendations
Force (Quantify)		Specific Job Tasks:	Solutions: Could investigate forces needed and used.
Tools & Equipment	Hardhat always even overhead work. Face Mask- Full face respirator- heavy battery pack, Radio, Sample swipes, Air sampler, Rad gloves, Probe. 3 racks Rad + Swipes. Ladder Meter 5-10 lbs. Pole swipe on end.	Specific Job Tasks:	Solutions: Investigate telescoping handles to avoid having a longer handle than necessary on brooms and ladders with platform for more stability
Other	24 Swipes for pipes + Valves 50/50 IH/RAD	Specific Job Tasks:	Solutions: See above

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Summary:

Previous injury - pinch below left shoulder blade.

1. Equipment solutions include:

- Investigating telescoping handles to avoid having a longer handle than necessary on brooms
- Investigating devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
- Ladders with platform for more stability

2. Educational solutions include:

- Basic ergonomic principles as applied to these job tasks
- Body mechanics
- A pre-work warm-up and periodic stretching program
- Education to avoid excess tension in work activities

3. Areas for further observation and analysis include:

- Demolition jobs
- Force requirements of jobs and ways to reduce required forces